

CLAIMS

- 1 1. An upwardly acting sectional door comprising, a plurality of panels, body portions
2 of said panels constructed of a flexible polymeric material and having a front
3 surface, a cladding covering said front surface of said body portions and having
4 hooks at the upper and lower edges thereof, a hinge member at an edge of said
5 body portion operatively engaging said hooks of adjacent of said panels to provide
6 relative pivotal motion between said adjacent of said panels.
- 1 2. A sectional door according to claim 1, wherein said hinge member is made of said
2 flexible polymeric material.
- 1 3. A sectional door according to claim 1, further comprising, stiles covering the ends
2 of said body portions and said cladding.
- 1 4. A sectional door according to claim 1, wherein said hooks interengage for relative
2 pivotal motion of said panels.
- 1 5. A sectional door according to claim 4, wherein said hinge member encompasses
2 said hooks when interengaged for relative pivotal motion of said panels.
- 1 6. A sectional door according to claim 5, wherein said hooks of adjacent of said
2 panels remain in sufficiently close proximity during pivotal motion of said panels
3 such as to provide a pinch-resistant configuration.
- 1 7. An upwardly acting sectional door comprising, a plurality of panels, facers of said
2 panels defining a front surface of the door and having pivotal closure assemblies
3 at the upper and lower edges thereof, end stiles at the ends of said panels adapted
4 to receive the ends of said facers, and hinge assemblies located at said end stiles
5 to provide relative pivotal motion between adjacent of said panels.

- 1 8. A sectional door according to claim 7 further comprising, coupler elements
2 operatively interrelated with said pivotal closure assemblies at one or more
3 locations on said facers intermediate said end stiles.
- 1 9. A sectional door according to claim 8, wherein said hinge assemblies define first
2 pivot axes between adjacent of said panels and said pivotal closure assemblies
3 define second pivot axes, said coupler elements operating to maintain said second
4 pivot axes coincident with said first pivot axes.
- 1 10. A sectional door according to claim 8, wherein said coupler elements are
2 deformable clips encompassing said pivotal closure assemblies.
- 1 11. A sectional door according to claim 10, wherein said clips are constructed of a
2 temporarily deformable material.
- 1 12. A sectional door according to claim 10, wherein said pivotal closure assemblies
2 are hooks at the upper and lower edges of said panels and said clips have a double
3 loop configuration enclosing said hooks of adjacent of said panels.
- 1 13. A sectional door according to claim 12, wherein said hooks of adjacent of said
2 panels remain in sufficiently close proximity during pivotal motion of said panels
3 such as to provide a pinch-resistant configuration.
- 1 14. A sectional door according to claim 12, wherein said hooks interengage for
2 relative pivotal motion of said panels.
- 1 15. A sectional door according to claim 7 further comprising, an insulation layer
2 provided behind said front surface of said facer.

- 1 16. A sectional door according to claim 15, wherein said insulation layer has a foam
2 material and a backer therefor.
- 1 17. A sectional door according to claim 15, wherein said insulation layer is solely
2 mechanically retained in said panels.
- 1 18. A sectional door according to claim 17, wherein said insulation layer has upper
2 and lower edges which are confined and retained by said pivotal closure
3 assemblies and has end edges which are confined and retained by said end stiles.
- 1 19. A sectional door according to claim 18, wherein said end stiles have a rear flange
2 with an in-turned flap which engages said end edges of said insulation layer.
- 1 20. A sectional door according to claim 7, wherein said end stiles are generally U-
2 shaped members adapted to receive said front surface and said pivotal closure
3 assemblies of said facers.
- 1 21. A sectional door according to claim 20, wherein said stiles have a front flange, a
2 rear flange, and a planar end spacing joining said front flange and said rear flange.
- 1 22. A sectional door according to claim 21, wherein said rear flange has an in-turned
2 flap directed toward said front flange which operates as a strengthening member
3 for said panels.
- 1 23. A sectional door according to claim 7, wherein said hinge assemblies include an
2 upper hinge pin receiver formed in said end stiles, a lower hinge pin receiver
3 formed in said end stiles, and roller assemblies connecting an upper hinge pin
4 receiver of one of said plurality of panels with a lower hinge pin receiver of an
5 adjacent of said plurality of panels.

- 1 24. A sectional door according to claim 23, wherein said end stile has a planar end and
2 said lower hinge pin receiver is a bore in said planar end of said end stile.
- 1 25. A sectional door according to claim 24, wherein said end stiles have a flange, said
2 upper hinge pin receiver is a cylindrical sleeve projecting from said flange of said
3 end stiles.
- 1 26. A sectional door according to claim 25, wherein said roller assemblies have a
2 roller shaft insertable in said bore and said cylindrical sleeve and serving as a pivot
3 axis for relative pivotal motion between adjacent of said panels.
- 1 27. A sectional door according to claim 26, wherein said roller shaft has spaced
2 annular ribs limiting axial movement of said roller shaft relative to said bore and
3 said cylindrical sleeve.
- 1 28. A sectional door according to claim 27, wherein said flange of said end stile has
2 an in-turned arcuate flange centered about said bore and engaging said pivotal
3 closure assemblies and maintaining said pivotal closure assembly pivotally
4 positioned in engagement with said cylindrical sleeve.
- 1 29. A combined roller assembly and cable-securing device for an upwardly acting
2 sectional door comprising, a door panel, an end stile on said door panel having an
3 end surface, an aperture in said end surface of said end stile, a roller assembly
4 having a roller shaft inserted in said aperture, a cable bracket having a collar
5 adapted for securing a cable for operating the door and receiving said shaft of said
6 roller assembly.
- 1 30. A roller and cable-securing device according to claim 29, wherein said collar has
2 an internal diameter sufficiently larger than the diameter of said roller shaft such
3 as to remain spaced therefrom during operation of the door.

- 1 31. A roller and cable-securing device according to claim 30, wherein said collar has
2 a groove adapted to receive the cable for operating the door.
- 1 32. A roller and cable-securing device according to claim 30, wherein said cable
2 bracket has a projection attached to said collar which is fastened to said end stile.
- 1 33. An upwardly acting sectional pan door comprising, a plurality of panels, facers of
2 said panels defining a front surface of the door and having cooperatively engaging
3 closures at the upper and lower edges thereof, stiles at the ends of said facers
4 receiving and attached to said facers, and hinge assemblies located at said end
5 stiles to provide relative pivotal motion between said stiles and said closures of
6 adjacent of said panels.
- 1 34. A pan door according to claim 33, wherein said cooperative engaging closures are
2 generally hook-shaped members.
- 1 35. A pan door according to claim 34 further comprising, coupler elements supporting
2 said cooperative engaging closures at a location intermediate said end stiles.
- 1 36. A pan door according to claim 35, wherein said coupler elements have a double
2 loop encompassing said hook-shaped members to stabilize said closures and said
panels during assembly and operation.